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Notice of Allowability	Application No.	Applicant(s)	
	08/885,770	BRINATI ET AL.	
	Examiner	Art Unit	
	Bernard Lipman	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to papers filed 02 December 2004 and 14 September 2005.
- 2. ☒ The allowed claim(s) is/are 1 and 3-14.
- 3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

- Attachment(s)**
- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard J. Berman, Esq. on 10 February 2006.

The application has been amended as follows: The Claims are to read as follows:

1. (Previously Amended) VDF polymerization process, optionally modified with small amounts, generally comprised between 0.1 and 10% by moles, of one or more fluorocontaining comonomers, for preparing VDF polymers showing improved levels of white index, carried out in the presence of a microemulsion comprising a (per)fluoropolyether having neutral end groups, or microemulsions of fluoropolyoxyalkylenes having hydrogen containing end groups and/or hydrogen-containing repeating units, or microemulsions of fluoropolyoxyalkylenes having hydrogen-containing end groups and/or hydrogen-containing repeating units and hydrocarbons C₁-C₂₀, of aliphatic, aromatic or mixed type, optionally containing halogens, said fluoropolyethers having number average molecular weight from 400 to 3000, and a surfactant based on perfluoropolyethers with a sodium carboxylate end group, said surfactant having a number molecular weight Mn comprised between 400-600, and having a distribution of molecular weight such that fractions having a number average molecular weight greater than 700 are not present or are present in amount of less than 5% by weight.
2. (Cancelled)
3. (Previously Amended) VDF polymerization process according to claim 1, wherein a microemulsion comprising a perfluoropolyether with neutral end groups is utilized.

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4. (Previously Amended) VDF polymerization process according to claim 1, wherein chlorotrifluoroethylene (CTFE), hexafluoropropene (HFP), tetrafluoroethylene (TFE) are utilized as comonomers.
5. (Previously Presented) VDF polymerization process according to claim 4, wherein the amount of modifying comonomer is comprised between 0.5-6% by moles.
6. (Previously Amended) VDF polymerization process according to claim 1, wherein the perfluoropolyethers with neutral end groups, optionally the end groups containing an hydrogen atom, utilized for preparing the microemulsions, comprise as repeating units sequences of one or more oxyfluoroalkylenic units such as $-\text{CF}_2(\text{CF}_2)_z\text{O}-$, wherein z is an integer equal to 1, 2 or 3, $-\text{CR}_4\text{R}_5\text{CF}_2\text{CF}_2\text{O}-$ wherein R_4 and R_5 equal to or different from each other are chosen from H, Cl or perfluoroalkyl from 1 to 4 carbon atoms, $-\text{CF}_2\text{CF}(\text{CF}_3)\text{O}-$, $-\text{CFYO}-$, wherein Y is equal to F or CF_3 .
7. (Previously Presented) VDF polymerization process according to claim 6, wherein the perfluoropolyethers have number average molecular weight comprised between 400 and 3000.
8. (Previously Amended) VDF polymerization process according to claims 6, wherein the perfluoropolyethers comprise as repeating units sequences of the classes:
 - a) $(\text{C}_3\text{F}_6\text{O})_m(\text{CFYO})_{n'}$ wherein the unit $(\text{C}_3\text{F}_6\text{O})$ and (CFYO) are perfluoroalkylenic units statistically distributed along the chain; m' and n' are integers such as to give the molecular weight indicated above, and m'/n' is comprised between 5 and 40, when n' is different from 0; Y is equal to F or CF_3 ; n' can be also 0; said units inside the fluoropolyoxyalkylenic chain can optionally be bound among each other by a bond $-\text{O}-\text{R}'_f-\text{O}-$, wherein R'_f has the meaning defined in c);
 - b) $(\text{C}_2\text{F}_4\text{O})_p(\text{CFYO})_{q'}-(\text{C}_3\text{F}_6\text{O})_t$ wherein p' and q' are integers such that p'/q' ranges between 5 and 0.3, preferably 2.7-0.5, and such that the molecular weight is the one indicated above; t' being an integer with the meaning of m' , $\text{Y} = \text{F}$ or CF_3 ; t' can be 0 and $q'/q'+p'+t'$ lower than or equal to 1/10 and the t'/p' ratio is from 0.2 to 6;

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- c) $\text{CR}_4\text{R}_5\text{CF}_2\text{CF}_2\text{O}$ wherein R_4 and R_5 are equal to or different from each other and chosen from H, Cl or perfluoroalkyl, for instance having 1-4 C atoms, the molecular weight being that indicated above, said units inside the fluoropolyoxyalkylenic chain being bound to each other as follows:



wherein R'_f is a fluoroalkylenic group, for instance from 1 to 4 C, p and q are integers from 0 to 200, and $p+q$ is at least 1 and such that the molecular weight is that indicated above,

- d) $\text{CF}(\text{CF}_3)\text{CF}_2\text{O}$

said units being linked each other inside the fluoropolyoxyalkylenic chain as follows:



wherein R'_f has the meaning indicated above, x is 0 or 1, a and b are integers and $a+b$ is at least 1 and such that the molecular weight is that indicated above,

- e) $(\text{C}_2\text{F}_4\text{O})_{a'}(\text{CFYO})_{b'}$

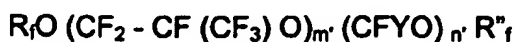
wherein a' and b' are integers such that the molecular weight is inside the indicated range, a'/b' ranges between 5 and 0.3, preferably between 2.7-0.5, Y has the meaning indicated above.

9. (Previously Amended) VDF polymerization process according to claim 1, wherein the neutral end groups of the perfluoropolyethers are perfluoroalkyls from 1 to 3 carbon atoms,

$\text{ClCF}_2\text{CF}(\text{CF}_3)-$, $\text{CF}_3\text{CFCICF}_2-$, $\text{ClCF}_2\text{CF}_2-$, ClCF_2- , in the case of microemulsions of fluoropolyoxyalkylenes having hydrogen-containing end groups, these are of the $-\text{CF}_2\text{H}$, $-\text{CF}_2\text{CF}_2\text{H}$, $-\text{CFH}-\text{CF}_3$ type.

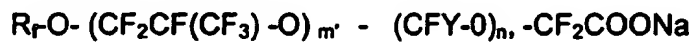
10. (Previously Amended) VDF polymerization process according to claim 1, wherein the perfluoropolyether surfactants have the same repeating units indicated for perfluoropolyethers.

11. (Previously Amended) VDF polymerization process according to claim 1, wherein the perfluoropolyethers have the following general formula:



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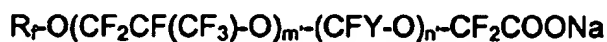
having a random distribution of the perfluorooxyalkylenic units, wherein R_f and R'_f equal to or different from each other are neutral end groups as defined above, m' and n' are integers such as to meet the above requirements of molecular weight, Y has the meaning indicated above; the surfactant based on perfluoropolyether has the following formula:



wherein R_f , m' , n' and Y have the above meaning indicated.

12. (Previously Amended) VDF homopolymers or VDF copolymers modified with amounts comprised between 0.1-10% by moles of one or more fluoro-containing comonomers according to claim 1.

13. (Previously Presented) VDF polymerization process according to claim 1, wherein the surfactant based on perfluoropolyethers has the following formula



wherein R_f is a C1 to C3 perfluoroalkyl group, $ClCF_2CF(CF_3)-$, $CF_3CFCICF_2-$, $ClCF_2CF_2$, $ClCF_2-$; $Y=-F$, CF_3 ; m' and n' are integers meeting the requirements of the number average molecular weight recited in claim 1.

14. (Previously Presented) The VDF polymerization process according to claim 1 wherein said surfactant has a number average molecular weight M_n comprised between 400-550.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Lipman whose telephone number is 571-272-1105. The examiner can normally be reached on 8-5 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bernard Lipman
Primary Examiner
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BL/hs